

NEW SPECIES AND EXTENDED RANGES OF NORTH
AMERICAN CARYOPHYLLACEÆ.

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(WITH PLATE XIII)

SINCE the publication of the last fascicle of the *Synoptical Flora*, containing a revision of the North American Caryophyllaceæ, four additional species, belonging to this family and growing within the range of the work mentioned, have come to the notice of the writer. These plants have been recently discovered in widely separated parts of our continent, and, with the possible exception of the *Drymaria* mentioned below, are undoubtedly indigenous, so that together they form a noteworthy addition to our already rich representation of this attractive family.

Stellaria oxyphylla.—Decumbent and rooting from the lower nodes: stems striate, leafy, dichotomously branched above, 3^{dm} or more in length, glabrous except along a puberulent line upon the dorsal surface of each branch: leaves elongated, lanceolate, caudate-attenuate, becoming 1^{dm} or more in length, 8 to 13^{mm} in breadth, nearly concolorous, minutely warty upon both surfaces, sparingly or even obsoletely ciliolate upon the margin, gradually attenuate to sessile somewhat connate bases; midrib pale, prominent upon the lower surface; veins finely reticulated (an intramarginal one clearly visible by transmitted light): peduncles slender, spreading or at length deflexed, 25 to 35^{mm} long, often nodding or recurved at the summit, borne in the forks of the branches and in the axils of the highest leaves: calyx glabrous, subturbinate at the base; sepals lanceolate, attenuate, in fruit about 6^{mm} in length, scarcely striate, persistent, becoming dry and some-

what scarious: petals half to two-thirds as long, white, oblong, cleft only about a quarter of their length or even less, the teeth often unequal: stamens five: styles three: ovary globose: valves of young fruit three, bifid; seeds not seen.—*Alsine Jamesii* Holzinger, Contrib. U. S. Nat. Herb. 3: 216, in part, *i. e.* as to no. 608.—Collected in flower July 8, 1892, on St. Joseph's river, Wiessner's Peak, Kootenai county, Idaho, at 1800^m altitude, by Messrs. Sandberg, MacDougal, and Heller, no. 608, and distributed as *Alsine Jamesii* from the Department of Agriculture.

This species has much the habit of the Japanese *S. Yezonesis* Maxim., which, however, is decandrous, has more deeply cleft petals and exhibits some other differences. *S. oxyphylla* is on the border line between *Stellaria* and *Arenaria* and indeed suggests at first sight *Arenaria macrophylla* Hook., although slight examination of the pubescence and calyx shows it to be quite distinct from that species, and, all points considered, there can be little doubt that its affinities are with *Stellaria*. It offers a drastic example of the deplorable haste with which the so-called reform of our nomenclature has at times proceeded; for the *Alsine Jamesii* of Holzinger, supposed to represent *Stellaria Jamesii* Torr., in reality rests upon a mixture of the very different *S. oxyphylla* (no. 608) and a luxuriant form of the cosmopolitan *S. media* Cyrill. (no. 78), species so widely diverse that it is truly difficult to see how the confusion could have occurred. It will be rather interesting to observe whether *Alsine Jamesii* Holzinger is to rest upon its synonymy (which by the way is not wholly correct, the original name being *Jamesiana*) and stand for a species which Mr. Holzinger may never have seen, certainly never examined, or whether as in other cases the name is to be taken as referring to the plants for which its author was actually using it.

***Stellaria Washingtoniana*.**—Delicate annual: stems decumbent, leafy, branching from the lower nodes or often quite simple, pubescent with fine white spreading or slightly felted hairs; branches simple or nearly so: leaves ovate, acute, subpetiolate, thin and of delicate texture, not lucid, about 8^{mm} long, 5 or 6^{mm} broad, puberulent or glabrous, finely ciliate near the contracted petiolar base, 1-nerved but showing in transmitted light pinnate veins as well as an intramarginal one: peduncles two to several, axillary, solitary, filiform, pubescent, about 1^{cm} in length, spreading, 1-flowered: calyx

campanulate, externally pubescent; sepals four, ovate, 2 to 3^{mm} long, narrowed to an obtusish apex, delicate in texture, herbaceous except on the margins, obscurely 3-nerved: petals none: stamens eight: styles three, recurved: ovary and capsule ovoid; seeds dark reddish brown, minutely roughened.— Collected in flower and fruit in alder woods of the upper valley of the Nesqually upon slopes of Mt. Rainier, Washington, June 18, 1895, by Professor O. D. Allen and forming no. 157 of his valuable set of Cascade mountain plants; also collected but chiefly in a sterile state on clayey banks near Lake Cushman, August 1895, by Professor C. V. Piper.

The affinities of the species are obviously with *S. obtusa* Engelm., *S. crispa* Cham. & Schlecht., and *S. calycantha* Bong. *S. obtusa*, however, is essentially glabrous, and has thicker obtuser apparently glaucescent leaves and sepals, while *S. crispa* is wholly glabrous and has narrower attenuate sepals, which are more or less distinctly ribbed near the base. *S. calycantha*, on the other hand, bears at least its lower flowers in the forks of a distinctly cymose inflorescence.

ARENARIA ULIGINOSA Schleicher.—This species, long known, although somewhat local, in alpine and boreal regions of Europe, as well as in Siberia and Greenland, has been collected on slaty detritus near Rama, northern Labrador, at about 300^m altitude, by Mr. J. D. Sornborger, August 1897. While the species appears in Watson's Bibliographical Index, under the name *A. stricta*, it has not, to the knowledge of the writer, been hitherto observed upon continental America, its citation in the Index being due to the fact that Dr. Watson included Greenland in the territory covered, as well as to the circumstance that he included in his synonymy of the species in question the quite different *A. Rossii* R. Br. As will be seen from the accompanying fig. 6 in Plate XIII, *A. uliginosa* can readily be distinguished from any of the related North American species by its foliage closely tufted at the base and by its very long and slender almost naked stems and peduncles. In these, as in all other observed characters, Mr. Sornborger's specimens correspond exactly with those from the Old World. The nature of the occurrence in Labrador, together with the presence of the

species in Greenland, leaves little doubt as to the indigenous character of the Labrador specimens.

This species has a rather complicated synonymy which has led to so much confusion that it will be best to cite its bibliography here in some detail. Its names have been as follows:

Spergula stricta Swartz, Vet. Acad. Handl. Stockh., 20:229. 1799; and in Schrad. Journ. 1800²: 256.

Arenaria uliginosa Schleicher, "Cent. exs. 1. n. 47," acc. to Lam. & DC. Fl. Fr. 4:786. 1805, where a good description is given; DC. Ic. Pl. Gal. Rar. 14 (excl. syn. in part), *pl.* 46; and Prodr. 1:407; Hook. f. Arct. Pl. 287, 322; Gray, Proc. Acad. Philad. 1863:58; Hook. f. Stud. Fl. Brit. Is. ed 3. 63; Britton, Mem. Torr. Club. 2:37.

Alsine stricta Wahlenberg, Fl. Lapponica 127. 1812; Fl. Dan. *pl.* 2962; Nyman Conspect. 118, and continental authors generally.

Arenaria Lapponica Spreng. Syst. 2:402. 1825; Hook. f. & Jacks. Ind. Kew. 1:179.

Sabulina stricta Reichenb. Fl. Germ. Excurs. 789. 1832.

Stellaria stricta Sw. ex Steudel, Nomencl. ed. 2, 2:637. 1841.

Arenaria stricta Wats. Bibliog. Index 98. 1878, at least as to the first three synonyms.

From the above synonymy it is evident that there is a considerable choice of names and that the selection by different authors is likely to vary somewhat according to individual ideas of classification and nomenclature. It is clear, however, that those who unite *Alsine* and *Arenaria* and who also prefer the "first correct combination" must choose *Arenaria uliginosa*, the name current in England. It is to be regretted that the statements made in regard to this species in the *Index Kewensis* are most conflicting and inaccurate, being as follows:

Under *Alsine*

A. stricta, Mert. and Koch, in Roehl. Deutschl. Fl. iii. 278 = *Ar. stricta*.

A. stricta, Wahlenb. Fl. Lapp. 127 = *Ar. lapponica*.

Under *Arenaria*

A. lapponica, Spreng. Syst. ii. 402.—Lappon. [given as a valid species of restricted range].

A. uliginosa, Schleich. ex Schlecht. in Ges. Naturf. Fr. Berl. Mag. vii. (1813) 207 = *Arenaria stricta*.

Under Sabulina

S. stricta, Reichenb. Fl. Germ. Excurs. 789 = *Arenaria stricta*.

Under Spergula

S. stricta, Sw. in Vet. Acad. Handl. Stockh. xx. (1799) 229 =
Arenaria stricta.

Now of these six clear references to this well-known European plant all are incorrect. Four refer it to *Arenaria stricta*, but the only plant of that name cited by the *Index Kewensis* is the common and wholly distinct American species of Michaux's *Fl. Bor. Am.* 1: 274, while the other two references to the plant under discussion maintain for it the name *Arenaria Lapponica* Spreng. (1825), which is much antedated both in *Arenaria*, *Alsine*, and *Spergula*, and is accordingly supported by no code or usage whatever. As further incidents in this confusion may be mentioned the neglect of Lamarck & De Candolle's early publication of *Arenaria uliginosa*, and the omission of Watson's *Arenaria stricta* which, as its synonymy clearly shows, was employed in a sense wholly different from *A. stricta* of Michaux.

In 1890 (Mem. Torr. Club 2: 37) Dr. N. L. Britton exactly expresses the position of the present writer, by his footnote, which runs as follows:

"*Arenaria stricta*, S. Wats., Bibliog. Index, Polypet. 98 (1878), is based on *Spergula stricta*, Sw. Act. Holm. xx. 229 (1799), which is *Alsine stricta*, Wahl. Fl. Lapp. 127 (1812), and the oldest name available for it appears to be *Arenaria uliginosa*, Schleich. Dr. Watson's binomial of 1878 can in no way displace Michaux' of 1803."

This position, stated so positively by Dr. Britton in 1890, is of course quite contrary to the unwise Madison rule of 1893, which asserts the immutability of an older specific name even when the species is transferred to a genus already containing an identical specific name of later date. As the writer has elsewhere shown, this provision, together with the dictum of "once a synonym always a synonym," would give a power to any thoughtless worker of displacing forever many valid specific names. Such a rule can certainly never attain general acceptance, and it is a pleasure to see from Dr. Britton's note of 1890,

how clearly he sees its disadvantages. Nevertheless it is a matter of surprise to note that he did not feel impelled to follow the Madison rules in the *Illustrated Flora*, nor even in the *List of Pteridophyta*, etc., (which was expressly prepared to illustrate the nomenclatorial system of the American Association), for in both works *Arenaria stricta* Michx. is still kept up, although the Madison rule would clearly establish *Arenaria stricta* (Sw.) Wats. for the European plant and force the adoption of *A. Michauxii* Fenzl. for the American. Dr. Britton's usage can scarcely be due to oversight, for he had so recently shown a complete understanding of the existence and distinctness of the two species concerned. But if, on the other hand, it is to be taken as a very sensible exception to an undesirable rule, it may be asked: What is to become of a rigid system, if even very sensible exceptions are permitted?

SPERGULARIA BOREALIS Rob.—Until recently this species has not been known south of Wells, Maine, where collected by Mr. Walter Deane. However, President E. Brainerd has brought to the notice of the writer specimens collected at North Dennis on Cape Cod by the Rev. C. N. Brainerd, and still more recently specimens from the banks of Seekonk river near Providence, Rhode Island, have been sent to the herbarium of the New England Botanical Club by Mr. J. F. Collins. These more southern specimens agree in all observed points with the northern. The best distinctive features appear to be the short blunt sepals and large seeds. *Figs. 2 and 3 of Plate XIII* will assist in distinguishing this species from *S. salina* Presl., the only member of the genus with which it is likely to be confused. An examination of the specimens of *Spergularia* in the herbarium of the Middlesex Institute, recently deposited in the herbarium of the New England Botanical Club, shows that *S. borealis* also grows on the salt marshes of the Mystic river, near Medford and Everett, Massachusetts, where discovered and distinguished from *S. salina* by Mr. F. S. Collins. Upon this material rests the *Lepigonum medium* of Dame & Collins, *Flora of Middlesex County*, p. 16. Now that the species is known within easy reach of many local

